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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,815	12/07/2001	Romel Amineh	367.40825X00	7745
20457	7590	04/06/2005	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			DANG, HUNG Q	
			ART UNIT	PAPER NUMBER
			2635	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,815

Applicant(s)

AMINEH, ROMEL

Examiner

Hung Q Dang

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 is/are allowed.
- 6) ☒ Claim(s) 1,6-8,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 2-5,9-11,18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to application's amendment received on 12/8/2004. The amended claims 1-19 have been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 4-8, 11, 16 and 17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 6-8, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al. U.S. Patent 6,032,053 in view of Nomura et al. U.S. Patent 6,700,508.

Regarding claims 1 and 16, Schroeder et al. teaches a communication unit (Figure 1A, unit 7) including a digital control (Figure 1B, unit 20) with associated random access (Figure 1B, unit 21) and read only memory (Figure 1B, unit 22) for control of said communication unit, which includes a user interface (Figure 1B, unit 26). However, Schroeder et al. does not teach said user interface including intra-changeable elements controlled by said processor.

Nomura et al. also teaches a user interface for use with electronic devices, wherein said user interface includes intra-changeable elements so that the operator can feel a large stroke when a key top is pressed (column 2, lines 39-46; units 3). As indicated on page 9 lines 8-12 of the specification of this application, then the term "intra-changeable elements" are elements in which their physical characteristics such as form, position, color, size etc. maybe changed as a result of a mechanical or electrical signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to equip the communication unit disclosed by Schroeder et al. with the user interface unit disclosed by Nomura et al. so that the operator can feel a large stroke when a key top is pressed, as evidenced by Nomura et al.

Claim 6 is rejected for the same reasons as claim 1. The intra-changeable elements disclosed by Nomura et al. are also compressible and expandable (column 2, lines 42-47).

Regarding claims 7 and 8, the intra-changeable elements disclosed by Nomura et al. are also piezo-electrical elements and elasto-resistive (column 3, lines 37-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide piezo-electrical and elasto-resistive elements to the user interface disclosed by Schroeder et al., as evidenced by Nomura et al., in order to provide a large stroke feeling to the operator when a key is pressed.

Regarding claim 17, the changeable characteristic of the intra-changeable element disclosed by Nomura et al. also includes change in form (column 3, lines 38-

41). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide intra-changeable elements that can change form, to the communication unit disclosed by Schroeder et al., as evidenced by Nomura et al., so that the operator can feel a large stroke when a key is pressed due to the compressible/expandable characteristic of said intra-changeable elements.

5. Claims 4, 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schroeder et al. U.S. Patent 6,032,053 in view of Nomura et al. U.S. Patent 6,700,508 and in further view of Freeman et al. U.S. Patent 5,931,764.

Regarding claims 4, 5 and 11, even though Schroeder et al. in view of Nomura et al. does not specifically suggest including said intra-changeable elements in the output device of said communication unit, however, one skilled in the art would recognize that such intra-changeable elements (piezo-electric elements) have been commonly equipped in the user interfaces, and output components (such as display, speaker) of communication units, as evidenced by Freeman et al. (column 2, lines 40-46).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide such intra-changeable elements to the output component of the communication unit disclosed by Schroeder et al. in view of Nomura et al., as evidenced by Freeman et al., in order to provide sensory effect to the operator.

Allowable Subject Matter

6. Claims 12-15 are allowed.

Regarding claims 12 and 14, the prior arts of record fail to teach or disclose a method for inputting of data to a communication unit as claimed in claims 12 and 14, wherein the keypad is provided with intra-changeable keys to provide sensory indication of the keys available (as supported on page 6 line 13 to page 7 line 11 of the specification).

Regarding claim 13, the prior arts of record fail to teach or disclose a method for transferring an input from a first communication unit to a second communication unit, and displaying said input as output in said second communication unit, wherein operation of said first communication unit includes transforming the input from said intra-changeable elements of said input device to electrical signals; transferring said electrical signals from said first communication unit to a second communication unit; and wherein said second communication unit includes receiving said electrical signals from said first communication unit to said second communication unit; retransforming said electrical signals in said second communication unit to output signals to intra-changeable elements of said second communication unit; and transferring said output signals to said intra-changeable elements of said second communication unit and expand said intra-changeable elements according to said output signals.

7. Claims 2-5, 9, 10, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 2, 3, 9 and 10, the prior arts of record fail to teach or disclose a communication unit as claimed in claim 1 characterized in that said intra-changeable elements are included in the input device of said communication unit, wherein the processor modulates the intra-changeable elements to provide a sensory indication of the options of said input device (as explained on page 6 line 13 to page 7 line 11 of the specification).

Regarding claims 18 and 19, the prior arts of record fail to teach or disclose a communication device as claimed in claims 16, wherein the intra-changeable element generates a control signal in response to a change in its characteristic.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q Dang whose telephone number is (571) 272-3069. The examiner can normally be reached on 9:30AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (571) 272-3068. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HD

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

